

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of preparing a heat-developable image recording material comprising a support, a photosensitive silver halide, a non-photosensitive organic silver salt, a reducing agent for a silver ion, and an emulsion layer comprising a binder comprising a polymer latex,

wherein said method comprises:

a step of desalting an additive containing a halogen ion by electrodialysis using an ion exchange membrane to form a desalted additive,

a step of emulsion polymerizing one or more monomers in the presence of the desalted additive to form the polymer latex with a halogen ion content of not more than 500 ppm, wherein the polymer latex is not subjected to purification using an ion exchange resin or a dialysis membrane, through a desalting step,

a step of forming the emulsion into a layer on a side of the support, said emulsion layer being an image forming layer, to form the heat-developable image recording material.

2. (Canceled)

3. (Previously Presented) The method as claimed in Claim 1, wherein the halogen ion is a chlorine ion.

4. (Canceled)

5. (Previously Presented) The method as claimed in Claim 1, wherein the binder has a glass transition temperature of from -20°C to 80°C .

6. (Previously Presented) The method as claimed in Claim 1, wherein the polymer latex contains a conjugated diene copolymer.

7. (Previously Presented) The method as claimed in Claim 1, wherein the reducing agent contains:

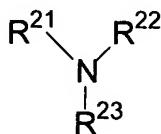
a phenol compound; and

a compound that satisfies at least one of the conditions (A) and (B):

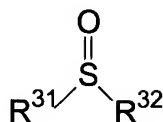
(A) : the compound having a hydrogen bond-forming rate constant (K_f) of from 20 to 4,000,

(B) : the compound having one of a phosphoryl group in its molecule, and a structure represented by formula (II),

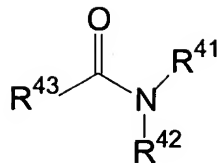
(III), (IV) or (V):



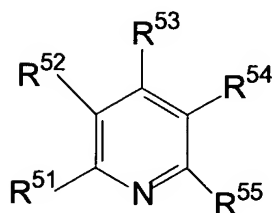
(II)



(III)



(IV)



(V)

wherein R²¹ and R²², which are the same or different, each represents an alkyl group; R²³ represents an alkyl group, an aryl group or a heterocyclic group; at least two of R²¹, R²² and R²³ may be combined with each other to form a ring,

R³¹ and R³², which are the same or different, each represents an alkyl group, an aryl group or a heterocyclic group; R³¹ and R³² may be combined with each other to form a ring,

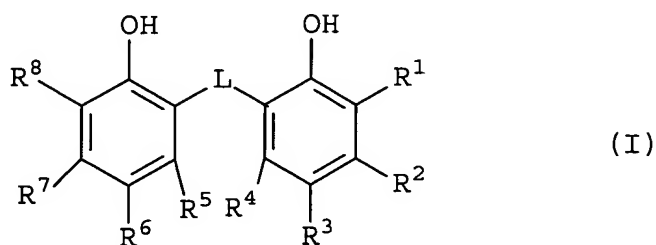
R⁴¹ and R⁴², which are the same or different, each represents an alkyl group, an aryl group or a heterocyclic group; R⁴³ represents an alkyl group, an aryl group, a heterocyclic group or –N(R⁴⁴)(R⁴⁵); R⁴⁴ and R⁴⁵, which are the same or different, each represents an alkyl group, an aryl

group or a heterocyclic group; at least two of R^{41} , R^{42} , R^{43} , R^{44} and R^{45} may be combined with each other to form a ring, and

R^{51} , R^{52} , R^{53} , R^{54} and R^{55} , which are the same or different, each represents a hydrogen atom or a substituent; at least two of R^{51} , R^{52} , R^{53} , R^{54} and R^{55} may be combined with each other to form a ring.

8. (Previously Presented) The method as claimed in Claim 7, wherein the phenol compound is an o-polyphenol compound.

9. (Previously Presented) The method as claimed in Claim 8, wherein the o-polyphenol compound is a compound represented by formula (I):



wherein R^1 , R^2 , R^3 , R^4 , R^5 , R^6 , R^7 and R^8 , which are the same or different, each represents a hydrogen atom or a substituent capable of being substituted on the benzene ring; L represents –S– or –CHR⁹–; and R^9 represents a hydrogen atom or an alkyl group.

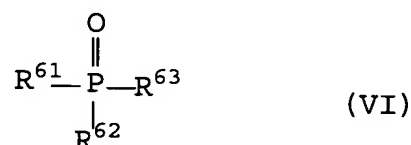
10. (Previously Presented) The method as claimed in Claim 9, wherein the compound represented by formula (I) is a compound in which R^2 , R^4 , R^5 and R^7 each represents a hydrogen atom; R^1 and R^8 each independently represents an alkyl group; R^3 and R^6 each independently represents an alkyl group; and L represents $-\text{CHR}^9-$.

11. (Previously Presented) The method as claimed in Claim 10, wherein R^1 and R^8 each independently represents a secondary alkyl group or a tertiary alkyl group.

12. (Previously Presented) The method as claimed in Claim 7, wherein the hydrogen bond-forming rate constant (Kf) is from 70 to 4,000.

13. (Previously Presented) The method as claimed in Claim 7, wherein the phenol compound is an o-polyphenol compound, and the compound which satisfies at least one of the conditions (A) and (B) is the compound having a phosphoryl group in its molecule.

14. (Previously Presented) The method as claimed in Claim 7, wherein the compound having a phosphoryl group in its molecule is a compound represented by formula (VI):



wherein R^{61} , R^{62} and R^{63} , which are the same or different, each represents an alkyl group, an aryl group, an aralkyl group, an alkoxy group, an aryloxy group, an amino group or a heterocyclic group.

15. (Previously Presented) The method as claimed in claim 1, wherein an image-forming layer is formed by combining the photosensitive silver halide, the non-photosensitive organic silver salt and the binder.

16. (Previously Presented) The method as claimed in claim 15, wherein the reducing agent for a silver ion is added to the image-forming layer.

17. (Previously Presented) The method as claimed in claim 15, further comprising forming a second image-forming layer containing the reducing agent for a silver ion.

18. (Previously Presented) The method as claimed in claim 1, wherein the polymer latex has a halogen ion content of not more than 100 ppm.

19. (Currently Amended) A method of preparing a heat-developable image recording material comprising an emulsion layer comprising a binder comprising a polymer latex having a halogen ion content of not more than 500 ppm,

wherein said method comprises:

a step of desalting an additive containing a halogen ion by electrodialysis using an ion exchange membrane to form a desalted additive,

a step of emulsion polymerizing one or more monomers in the presence of the desalted additive to form the polymer latex, wherein the polymer latex is not subjected to purification ~~through a desalting step using an ion exchange resin or a dialysis membrane, and~~

a step of forming the emulsion into a layer on a side of a support, said emulsion layer being an image forming layer, to form the heat-developable image recording material.

20. (Currently amended) The method as claimed in Claim 1, wherein the ~~polymer latex is formed with additives containing~~ desalted additive contains a halogen ion content of not more than 500 ppm ~~or with additives which have been subjected to a purification step.~~

21. (Currently amended) The method as claimed in Claim 19, wherein the ~~polymer latex is formed with additives containing~~ desalted additive contains a halogen ion content of not more than 500 ppm ~~or with additives which have been subjected to a purification step.~~